ZSL Policy on the Use of Animals in Research

This policy explains the circumstances in which research involving the use of animals may be undertaken by ZSL staff, students, and other representatives, and the relevant ethical and animal welfare principles and review processes.

Scope

This policy should be read in conjunction with the *Zoological Society of London's (ZSL's) Position Statement on the Use of Animals in Research*. It applies to all ZSL staff, registered students, EDGE Fellows and any other representatives (henceforth 'ZSL staff and other representatives') conducting research anywhere in the world which is under ZSL's supervision and involves either captive animals held by ZSL or partner groups outside their natural habitat, or wild animals within one of ZSL's research or conservation projects in the field.

Research involving animals held at ZSL's zoos must also comply with the *ZSL Zoos and Engagement Research Policy*.

Introduction

The need for use of animals in research

The use of animals in scientific research has made, and continues to make, significant contributions to biomedical and veterinary sciences; for example, in advancing our ability to diagnose, treat and prevent diseases in animals – including zoonoses – or to manage the health of animals in wild and captive settings.

Research involving tags, transmitters or collars physically attached to animals for monitoring purposes plays a similarly key role in the conservation and/or restoration of wild animal populations.

'Wildlife Health' and bringing endangered species 'Back from the Brink' are two of ZSL's key priority areas under our strategy ZSL 200. It follows that identifying and mitigating disease threats to wildlife, and effective monitoring of wild or reintroduced animals using tags or collars, are key components of the *in situ* and *ex situ* research undertaken in pursuit of our strategic goals.

As in other areas of our work, ZSL staff and other representatives engaged in research involving animals adhere to high ethical standards to ensure the welfare of animals in their care.

This policy is under continuous review to reflect legislative changes and current best practice.

Legislative context and necessary review bodies

UK legislation relevant to scientific research using animals includes the **Animals (Scientific Procedures) Act 1986 Amendment Regulations 2012** (ASPA), the **Veterinary Surgeons Act 1966** (which covers the use of animals for training veterinary students), the **Animal Welfare Act 2006**, and the **Zoo Licencing Act 1981**.

All research regulated by ASPA requires Home Office project and personal licences. The supervising institution must also fulfil a number of conditions including appointing a Named Veterinary Surgeon (NVS), a Named Training and Competency Officer (NTCO), a Named Animal Care and Welfare Officer (NACWO), a Named Information Officer (NIO), arranging training and competency assessments, holding workshops on animal research topics, and setting up an Animal Welfare and Ethics Review Body (AWERB) as defined by the UK government's Animals in Science Committee. Setting up an AWERB and ensuring it reviews and approves all ASPA-regulated research is a legal requirement for all organisations engaged in such work.

Research involving animals that is not regulated by ASPA (e.g. because it is occurring outside the UK) must of course also fulfil ZSL's commitment to the highest standards of animal welfare and comply with all relevant legislation. To this end our Ethics Committee for Animal Research (ECAR) formally reviews all such non-ASPA-regulated work.

The AWERB is, effectively, a sub-committee of the ECAR, and each committee meets separately.

The AWERB provides advice to ZSL's Director of Science, who holds the 'ZSL Establishment' Home Office licence. The ECAR provides advice to whichever Director oversees the research in question.

Ensuring high standards of animal welfare

Project design

Research on animals is conducted by ZSL only when it will contribute to the advancement of knowledge, preferably to inform conservation, and/or lead to improvements in the health and welfare of animals. All such research is undertaken on the basis of well-defined scientific objectives and gives due consideration to the welfare of the animals. Principal Investigators ensure that studies involving animals are planned ethically and that the research complies with ASPA and any other relevant legislation, as well as any relevant codes of practice, whether the work is carried out at ZSL, in the field, or at other research organisations.

Careful consideration is given at the project planning stage to the outcome for the animals at the end of the programme of work; e.g. rehoming, release or euthanasia (if required).

Care is also taken to ensure that maximum use is made of all outputs of value to research, including blood, body tissues, integument and bodily excretions. This includes sharing with other researchers.

We aim to minimise the number of animals used and avoid unnecessary replication. To this end we apply the principles of the **National Centre for Replacement, Refinement and Reduction of Animals in Research (NC3Rs)** ARRIVE guidelines – *Responsibility in the use of animals in bioscience research* – and we align our work with the UK government's commitment to create a science-led approach to reduce the use of animals in the biosciences:

Replacement

Research that uses animals will only take place when there is no practical alternative. Before submitting their project outlines for ethical review or applying for a Home Office project licence (where required) researchers will have given full consideration to non-animal methods such as computer modelling, imaging technology, and tissue- and cell-based research. Our work includes the development of non-animal models to gain the knowledge required to address threats to wildlife health.

Reduction

We are committed to ensuring that researchers use the minimum number of animals needed to meet their scientific objectives. We continuously review all active projects and require principal investigators to justify the number of animals used in research. We use statistical analyses at the design stage of our work to ensure the minimum number of animals are used, we analyse our research outputs and revise our methods accordingly, and we collaborate and share our results and other research outputs with other institutions.

Refinement

All staff and students involved in the use of captive animals in research are committed to a culture of care. Captive animals involved are transported, housed and cared for by dedicated and trained staff, strictly adhering to the **Code of Practice for the Housing and Care of Animals Bred, Supplied or Used for Scientific Purposes.** We generate best-practice guidelines in animal welfare and experimental design, and maintain dedicated animal facilities. We continually review our own processes to enhance methods and protocols that are disseminated globally to provide optimal care for animals used in research.

Veterinary advice

ZSL's NVS is contactable at all times for consultation and provision of care for protected animals. The NVS approves the anaesthesia and analgesia regimes proposed in all research projects, authorises the use of any prescription drugs and makes recommendations to the AWERB about individual projects.

Sample collection

Research that involves the collection of samples (blood, body tissues, integument and bodily excretions) anywhere in the world must adhere to any legislation, regulations and good-practice guidelines that govern the activities being undertaken, including the catch/release of any invertebrate or vertebrate animals, and the import and export of animals or genetic resources derived from them. Utilisation of such samples should be conducted in compliance with the **Nagoya Protocol**.

Review processes

All animal-based research at ZSL is undertaken in compliance with all relevant legislation.

Applications for Home Office project licences for research regulated under ASPA must be completed in consultation with our NVS and NACWO and are subject to internal ethical review by ZSL's AWERB, which repeats review of licences at regular intervals for the duration of the research project to ensure that all refined techniques are applied.

Research not falling under ASPA is similarly reviewed by the ZSL ECAR.

Both bodies comprise independent animal welfare experts, veterinary surgeons, lay members not involved in animal research, animal technicians and academic representatives, and are available to advise researchers on project proposals before submission.

Research conducted on animals in natural habitats is of course subject to the same ethical review processes and standards of animal welfare as for research in laboratory conditions. Care is taken not to disturb such animals unnecessarily or cause detrimental changes to their environment.

Research conducted outside the UK and involving either wild or captive animals is only undertaken after the required permits from the appropriate governing body/ies of the country concerned are in place, which must occur prior to any animals being disturbed or collected for study. Ethical review for such work includes a requirement for confirmation that all relevant national legislation has been complied with.

Training and Competence

ZSL is committed to ensuring that all those working with animals in research possess the necessary skills to fulfil their responsibilities under relevant legislation.

All staff and other representatives carrying out procedures regulated under ASPA must undergo prior training, demonstrate relevant experience, and be authorised by the Home Office. Project and personal licences for such work are certified following the requirements of the Home Office, and our NTCO ensures that all staff and students working under ASPA are aware of their roles and responsibilities and work under appropriate supervision. The NTCO carries out regular competency assessments during the life of an ASPA-regulated project to ensure skills remain accurate and consistent with current research practice.

Staff or other representatives carrying out research involving animals that is not regulated by ASPA, e.g. because it occurs outside the UK, are asked by ECAR to provide evidence that they are appropriately trained, as part of the ethical review process. Appropriate training is provided wherever possible to UK-based staff prior to travel to relevant project locations outside the UK; and is included in training courses held outside the UK such as the EDGE Conservation Tools course.

Communicating our animal research

ZSL is committed to sharing the objectives, methods and results of its research, through publication and through both scientific and general media coverage. Staff and students are actively involved in communicating with the public about their work. When we communicate about research that has used live animals, we explain how and why these animals were involved.

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